

Table ES-1 Summary of Alternatives Considered But Eliminated																					
Screening Criteria	Energy Sources & Conveyance					Power Plant Processes										Waste Stream Treatment & Disposal					
	Alternative Fuel Sources					Alternative Water Sources			Cooling Systems	Alternative Combustion Systems				Generation Sites	Alternative Pollution Control and Solid Waste Treatment			Alternative Solid Waste Disposal Methods			
	Lower Sulfur Coal	Synthetic Fuels (e.g., shale oil, tar sands, etc.)	Coal Bed Methane	Gases	Fuel Cells	Yellowstone River	Musselshell River	Shallow Aquifers	Wet Cooling	Stoker	IGCC	Alternative Boiler Types	Gas Turbines / Combined Cycle		Ash & Wet FGD	Wet FGD	Separate Bottom Ash from Waste	Waste Rock Landfill	Off-Site Landfill for Life of Project	On-Site Landfill for Life of Project	
Technical	Technically feasible, however coal-fired powerplants are designed to burn specific coal. Therefore, not technically feasible using the current design.	Technically feasible, but would not be feasible under current design. It is doubtful that the source could not solely support proposed load	Technically feasible, but would not be feasible under current design. Source may not be available as fuel supply after 2008	Technically feasible, but not feasible under the current design. There are many gas facilities planned throughout the country competing for limited supplies of gas.	Techically feasible, however not feasible under current design and for this size facility. Design is totally different and tied to gas or hydrogen.	Technically feasible - a pipeline could be constructed and water rights may be available.	Technically feasible, although there is not likely enough water consistently available from the Musselshell to make it a reasonable alternative water source.	Technically feasible, although not enough water is likely available from the shallow aquifer to make it aq reasonable water source.	Technically feasible, although this would increase the amount of water needed and would result in additional water resource impacts.	Technically feasible, but not practical economically.	Technically feasible.	Cyclone and CFB boilers would be used to burn higher sulfur coal and use smaller boilers. Three CFB units would be needed. Solid waste would increase.	Technically feasible in one of many different configurations being used around the country.	Other sites are not feasible in order to utilize Bull Mountain coal.	Dewatering and treating.	Waste streams would have to be separated and treated	Process would include keeping bottom ash separate from the fly ash and flu gas wastes. Disposal would be segregated.	Would need to modify Waste Rock Repository to accommodate and isolate Ash Lens	Would require additional permits.	Would likely be difficult to accommodate waste disposal on-site for the life of the project due to limited space available.	
Logistics	Cost would be much higher to transport coal from other mines.	There are no conveyances available for fuel supply.	There are no conveyances available for fuel supply.	There are no conveyances available for fuel supply.	There are no conveyances available for fuel supply.	Require pipelines, pump stations, and easements	Require pipelines, pump stations, and easements	Would require additional wells. Woulddrawdown local wells in the area	Would require different design and increase water use.	Would require completely new facility design. This system would burn more coal for same MW output.	Would require completely new facility design.	Would require completely new facility design. This system would burn more coal for same MW output.	Would require completely new facility design. No gas lines are within the area that could supply the fuel requirements. Facility would burn more gas for same MW output.	The handling logistics of transporting coal to another site would make the plan uneconomical and therefore infeasible.	Would require adding slurry pipeline and pumps.	Would require adding slurry pipeline and pumps.	Would not affect air emissions. Would require separate handling and segregated disposal, thus increasing costs.	Would need to truck at least 20 loads of ash to waste rock area per day.	TSDF construction.	TSDF construction.	
Economics	Ecomonics of the facility dependent upon an abundant supply of coal in the immediate vicinity as a mine-mouth project	Ecomonics of the facility rely upon an abundant supply in the immediate vicinity, of which there are none.	Ecomonics of the facility rely upon an abundant supply in the immediate vicinity, of which there are none.	Ecomonics of the facility rely upon an abundant supply in the immediate vicinity, of which there are none.	Ecomonics of the facility are infeasible and cost prohibitive.	Would be much more expensive and would likely result in the costs being prohibitive.	Would be more expensive due to conveyance costs. Also, insufficient supplies of water would be available.	May or may not be more expensive, but supply is not likely to be sufficient.	Cost of additional water could increase costs.	More reasonable cost s but could not meet the expected outputs	No data, but costs per MW output would be expected to substantially increase.	No cost analyses were performed for these types of designs.	No cost analyses were performed for these types of designs	Other generation sites would not be as cost effective as a mine-mouth concept, and would therefore be infeasible.	Most economical, but water supply is an issue for this project.	Most economical, but water supply is an issue for this project.	Additional handling and segregated disposal would likely be somewhat more expensive.	Assume costs are similar or somewhat higher because of additional logistics to coordinate waste rock and solid waste disposal.	Would be more expensive because of handling and transportation costs.	Would likely be more expensive for special design and handling to accommodate the solid waste on-site in limited space.	
Regulatory Considerations	No expected changes in regulation except that new emission rates would have to be calculated and modeled	No expected changes in regulation except that new emission rates would have to be calculated and modeled	No expected changes in regulation except that new emission rates would have to be calculated and modeled	No expected changes in regulation except that new emission rates would have to be calculated and modeled	No regulations.	Would require water right acquisition.	Would require water right acquisition (e.g., purchase from irrigators).	Would require water right acquisition. Also, insufficient supplies would likely be available on a consistent basis.	Fugitive PM10 emissions from wet cooling towers would have to be calculated and included in modeling analysis.	No expected changes in regulation except that new emission rates would have to be calculated and modeled	No expected changes in regulation except that new emission rates would have to be calculated and modeled	No expected changes in regulation except that new emission rates would have to be calculated and modeled	No expected changes in regulation except that new emission rates would have to be calculated and modeled	Regulatory requirements could be somewhat different to accommodate transport of coal and water.	Air permit would need to be modified.	Air permit would need to be modified.	Solid waste permit would need to be modified to accommodate logistics and handling with waste rock.	Would have to modify permit to accommodate this type of disposal.	TSDF permit.	Would have to permit expanded facility to accommodate off-site disposal.	
Potential Resource Impacts	Similar to Proposed Action	Similar to Proposed Action	Similar to Proposed Action	Similar to Proposed Action	Water Resource impacts. Air impacts would be minimized or eliminated.	Additional impacts to water resources, fisheries, and other resources from a pipeline.	Additional impacts to water resources, fisheries, and other resources from a pipeline.	Would likely result in impacts to wetlands and water resources, and could affect well production in the area.	Additional impacts to water quality and quantity.	Additional air, solids and water resource impacts would likely result.	Additional air, solids and water resource impacts would likely result.	Air emissions would likely be higher and solid wastes would be increased.	Similar to Proposed Action after air quality mitigation.	More impacts would result to air quality because of transportation costs for the fuel.	Solid waste treatment would be more difficult and would result in more impacts to water quality and quantity.	Solid waste treatment would be more difficult and would result in more impacts to water quality and quantity.	Likely would result in similar impacts as the Proposed Action.	Would increase size of Waste Rock Repository	Could aggravate exposure to groundwater impacts	Solid waste off-site would result in slightly higher environmental impacts, although waste stream not expected to have measurable effect on groundwater resources.	
Reasonable/ Feasible	Not reasonable because of fuel transportation costs, increased cost of logistics, and would not meet the purpose and need for the Proposed Action.	Not economically feasible and would not meet the stated purpose and need for the Proposed Action.	Not economically feasible and would not meet the stated purpose and need for the Proposed Action.	Not economically feasible and would not meet the stated purpose and need for the Proposed Action.	Not economically feasible and would not meet the stated purpose and need for the Proposed Action.	Not reasonable because increased costs of pipeline and treatment would make the project infeasible.	Not reasonable because of increased costs of pipeline and treatment, and insufficient water supplies available.	Not reasonable because of insufficient water supplies available.	Common design, but increase in water usage would result in higher construction and operation costs and increased water resources impacts. Alternative is not reasonable.	Not reasonable because increased costs would make the project infeasible, thus not meeting the stated purpose and need.	Not reasonable because increased costs would make the project infeasible, thus not meeting the stated purpose and need.	Not reasonable because these boiler types are designed for different fuel not available at this location.	Not reasonable because turbines are designed for different fuel and since adequate supplies of gas are not available, this alternative is not feasible.	Would not reasonably meet the purpose and need for the Proposed Action because increased costs would make the project infeasible.	Not reasonable since this technology would require additional water and would result in higher impacts to water resources.	Not reasonable since this technology would require additional water and would result in higher impacts to water resources.	Additional handling and segregated disposal would likely be somewhat more expensive, and was eliminated from further consideration because of increased costs and handling with no benefit.	Not a reasonable alternative because additional logistics and costs with no benefit, and is considered and eliminated.	Is not reasonable because increased costs would result in no benefit.	Not reasonable because of space limitations.	